



TM

**STRONG PARTNERS. TOUGH TRUCKS.**

## **High Capacity Forklift Trucks H16.00-18.00XM-12, H16.00-18.00XMS-12**

16 000 – 18 000 kg @ 1 200mm



# H16.00-18.00XM(S)-12

CHARACTERISTICS	1.1	Manufacturer
	1.2	Model designation
	1.3	Power: battery, diesel, LPG, electric mains
	1.4	Operation: manual, pedestrian, stand, seat, orderpicker x (mm)
	1.5	Load capacity Q (kg)
	1.6	Load centre c (mm)
	1.8	Load distance (with hook-type carriage) x (mm)
	1.9	Wheelbase y (mm)

WEIGHTS	2.1	Unladen weight kg
	2.2	Axle loading with load, front/rear kg
	2.3	Axle loading without load, front/rear kg

WHEELS & TYRES	3.1	Tyres: L=pneumatic, V=solid, SE=pneumatic-shaped solid
	3.2	Tyre size, front inch
	3.3	Tyre size, rear inch
	3.5	Number of wheels, front/rear (X = driven)
	3.6	Track width, front b <sub>10</sub> (mm)
	3.7	Track width, rear b <sub>11</sub> (mm)

DIMENSIONS	4.1	Mast tilt, α = forward/β = back degrees
	4.2	Height of mast, lowered h <sub>1</sub> (mm)
	4.3	Freelift ♦ h <sub>2</sub> (mm)
	4.4	Lift height ♦ h <sub>3</sub> (mm)
	4.5	Maximum height of mast, extended h <sub>4</sub> (mm)
	4.7	Height of basic truck (without mast), cab ■ h <sub>6</sub> / h (mm)
	4.8	Seat height h <sub>7</sub> (mm)
	4.19	Overall length ● l <sub>1</sub> (mm)
	4.20	Length to face of forks l <sub>2</sub> (mm)
	4.21	Overall width over front tyres b <sub>2</sub> (mm)
	4.31	Ground clearance under mast (with load) m <sub>1</sub> (mm)
	4.32	Ground clearance, centre of wheelbase m <sub>2</sub> (mm)
	4.33	Stacking aisle width, 2 400 x 2 400 mm load, without clearance Ast (mm)
	4.33	Stacking aisle width, 2 400 x 2 400 mm load, incl. 200 mm clearance Ast (mm)
	4.35	Outer turning radius W <sub>a</sub> (mm)

PERFORMANCE	5.1	Travel speed with/without load km/h
	5.2	Lifting speed with/without load, with 145 kW (195 Hp) engine m/sec
		Lifting speed with/without load, with (optional) 172 kW (230 Hp) engine m/sec
	5.3	Lowering speed with/without load m/sec
	5.6	Drawbar pull with load / without load, @ 1.6 km/h kN
		Drawbar pull with load / without load, maximum kN
	5.7	Gradeability with load / without load, @ 1.6 km/h † %
		Gradeability with load / without load, maximum † %
	5.9	Acceleration time with/without load (0 to 15 m) sec
	5.10	Service brake

ENGINE	7.1	Engine manufacturer/type
	7.2	Engine performance kW (Hp)
	7.3	@ engine speed rpm
	7.4	Number of cylinders/displacements cm <sup>3</sup>
	7.5	Fuel consumption for medium to heavy duty use, with 145 kW / (optional) 172 kW engine l/h

OTHER	8.1	Drive control
	8.2	Pressure for attachments bar
	8.3	Oil flow for attachments l/min
	8.4	Average noise level, operator's ear, BITA Leq / EN12053 dB (A)
	8.5	Towing coupling type

HYSTER		HYSTER	
H16.00XM-12		H16.00XMS-12	
Diesel		Diesel	
Seat		Seat	
16 000	18 400	16 000	18 400
1 200	900	1 200	900
1 089		1 089	
3 750		3 500	

26 275		26 975	
38 735	3 540	39 125	3 850
13 035	13 245	12 730	14 245

L		L	
12.00 x 24		14.00 x 24	
12.00 x 24		14.00 x 24	
4X	2	4X	2
2 350		2 550	
2 175		2 120	

10	12	10	12
4 390		4 425	
0		0	
5 300		5 300	
7 040		7 075	
3 345	3 535	3 380	3 575
2 145		2 180	
8 230		8 000	
5 790		5 560	
2 810		2 945	
260		296	
344		384	
8 700		8 530	
8 900		8 730	
5 255		5 000	

26	28	27	31
0,33	0,38	0,33	0,38
0,33	0,38	0,33	0,38
0,34	0,39	0,34	0,39
97	99	111	91
126	128	114	115
24	42	24	35
32	35	29	37
5,9	6,5	5,9	6,5
Oil immersed brakes		Oil immersed brakes	

Cummins QSB 6.7		Cummins QSB 6.7	
145 kW (195 Hp)		145 kW (195 Hp)	
option 172 kW (230 Hp)		option 172 kW (230 Hp)	
1 800		1 800	
6	6 700	6	6 700
15	16	15	16

3-speed autoshift SOH TE13 optional SOH TE17		3-speed autoshift SOH TE13 optional SOH TE17	
150		150	
105		105	
74	75	74	75
Pin		Pin	

**NOTE:** Specifications are affected by the conditions of the vehicle and how it is equipped, as well as the nature and condition of the operating area. If these specifications are critical, the proposed application should be discussed with your dealer.

† Gradeability figures (lines 5.7 & 5.8) are provided for comparison of tractive performance, but are not intended to endorse the operation of the vehicle on the stated inclines. Follow instructions in the operating manual regarding operation on inclines.



**H16.00XM(S)-12 - Rating @ 1 200 mm****and Multi-Rating @ 1 200, 1 000, 900mm**

Mast lift height (TOF) (mm)	Mast lowered height (mm)	Capacity (kg) @ 1 200 mm load ctr		Capacity (kg) @ 1 200 mm load ctr		Capacity (kg) @ 1 000 mm load ctr		Capacity (kg) @ 900 mm load ctr	
		Sideshift - Forkpos. Carriage & Hook - type Q.D.Forks	Back tilt degr.	Sideshift - Forkpos. Carriage & Hook - type Q.D.Forks	Back tilt degr.	Sideshift - Forkpos. Carriage & Hook - type Q.D.Forks	Back tilt degr.	Sideshift - Forkpos. Carriage & Hook - type Q.D.Forks	Back tilt degr.
3 750	3 562	16 000	12	16 000	12	17 600	12	18 140	12
4 650	4 012	16 000	12	16 000	12	17 600	12	18 140	12
5 400	4 387	16 000	12	16 000	12	17 600	12	18 140	12
6 200	4 787	15 800	12	15 800	12	17 350	12	17 890	12
6 700	5 037	15 650	10	15 650	10	17 120	10	17 710	10
7 000	5 187	15 500	10	15 500	7	16 980	7	17 600	7

**H18.00XM(S)-12 - Rating @ 1 200 mm****and Multi-Rating @ 1 200, 1 000, 900mm**

Mast lift height (TOF) (mm)	Mast lowered height (mm)	Capacity (kg) @ 1 200 mm load ctr		Capacity (kg) @ 1 200 mm load ctr		Capacity (kg) @ 1 000 mm load ctr		Capacity (kg) @ 900 mm load ctr	
		Sideshift - Forkpos. Carriage & Hook - type Q.D.Forks	Back tilt degr.	Sideshift - Forkpos. Carriage & Hook - type Q.D.Forks	Back tilt degr.	Sideshift - Forkpos. Carriage & Hook - type Q.D.Forks	Back tilt degr.	Sideshift - Forkpos. Carriage & Hook - type Q.D.Forks	Back tilt degr.
3 750	3 734	18 000	12	18 000	12	19 900	12	20 410	12
4 650	4 184	18 000	12	18 000	12	19 800	12	20 410	12
5 400	4 559	18 000	12	18 000	12	19 800	12	20 410	12
6 200	4 959	17 800	12	17 800	10	19 480	10	20 160	10
6 700	5 209	17 600	10	17 600	7	19 070	7	19 910	7
7 000	5 359	17 410	10	17 410	7	18 870	7	19 660	7

## Capacity Ratings

### High Capacity

- At load centres shorter than 1200mm load centres, capacities higher than nominal are possible, e.g.:
  - H16.00XM(S)-12 handles 18 140 kg @ 900 mm l.c., up to 5.40 m lift height.
  - H18.00XM(S)-12 handles 20 410 kg @ 900 mm l.c., up to 5.40 m lift height.

For full capacity data, please refer to the capacity table above.

### Capacity Ratings Available

- Single-rating at 1 200 mm load centre (and a corresponding mast back tilt angle, depending on mast lift height, please refer to the capacity table above).

- Multi-rating at 1 200-1 000-900 mm load centre (and a corresponding mast back tilt angle, depending on mast lift height, please refer to the capacity table above).

### Masts

- Automatic 2-stage hoist system, for high lifting speeds, both laden and unladen.
- Rear-mounted lift cylinders (behind the mast channels), for excellent visibility.
- Mid-high-mounted tilt system.
- Hose group (for 2 auxiliary functions: 2 x fork positioner, and combined sideshift).

Note: For the correct backtilt angle corresponding to a specific mast lift height, please refer to the capacity table above.



### Carriage

- › Multi-purpose, hook-type, sideshift, fork positioning carriage
- › Overall width 2672 mm for H16.00XM(S)-12, and 2900 mm for H18.00XM(S)-12.
- › Sideshift movement, to each side, is 0-361 mm for H16.00XM(S)-12, and 0-437 mm for H18.00XM(S)-12, depending on the position of the forks.
- › With independent fork positioners (forks can be moved individually),
- › Fork positioning range for H16.00XM(S)-12: 998 mm is a minimum over the forks (598 mm in between forks) and 2444 mm maximum over the forks.

- › Fork positioning range for H18.00XM(S)-12: 1000 mm is a minimum, over the forks (500 mm in between forks) and 2750 mm maximum, over the forks.

- › Multi-purpose quick-disconnect system, for use with multi-purpose hook-type forks.

### Forks

- › 2440 mm long, **multi-purpose, hook-type**, quick-disconnect forks,
- › Fork section:  
H16.00XM(S)-12: 200 mm wide x 100 mm thick  
H18.00XM(S)-12: 250 mm wide x 100 mm thick  
To suit the multi-purpose, hook-type, sideshift-fork positioning carriage.





## Built on Experience

The H16.00-18.00XM(S)-12 Series benefits from Hyster's long experience of designing and building high capacity forklift trucks. This is the 5th generation machine, since the H360A of 1951, and offers fast handling, reliable proven components, high productivity and represents an excellent return on investment.



## Extra Value Features

The H16.00-18.00XM(S)-12 range represents impressive value, in a high-specification package:

### Compact

- › H18.00XM-12 model now features the same 3.75 m wheelbase as the H16.00XM-12.
- › The compact “S” (short) H16.00XMS-12 and H18.00XMS-12 models, feature a shortened wheelbase of only 3.50m, ideal for applications where operating space is restricted.

### Productive

- › Lifting speeds are class leading: The practical 4-mode average speed is a fantastic 0.36 m/sec.
- › Extremely stable machine with a weight of 26 to 31 tonnes, and a wheelbase of 3.75 m (3.50 m for ‘S’ models), plus front width of 2.81 to 2.94 m.

### Durable

- › Large 6.7 litre, cleaner running Cummins diesel engine conforms to stringent EC Tier 3 emission regulations for NRMM (Non-Road Mobile Machinery).
- › The 3-speed autoshift transmission features a protective lock-out on forward-reverse shifting.

- › Engine and transmission protection systems.
- › Strong and wide AxleTech drive axle with oil-immersed (wet) disc brakes.
- › Generously sized cooling system (engine, transmission, brakes, hydraulic system), making the truck suitable for working in ambient temperatures of up to 50°C in normal operating conditions, or up to 45°C for heavy duty operations.
- › Large 12.00 x 24 or 14.00 x 24 tyres as standard, for improved tyre life and lower running costs.

### Comfortable

- › The industry leading-design of the Hyster ‘Vista’ cab offers excellent driver comfort, ergonomics, low noise and visibility, featuring standard air-conditioning and a noise level of just 74 dB(A) Leq at driver’s ear.
- › The Mid-high mounted cab position provides maximum visibility all-round.





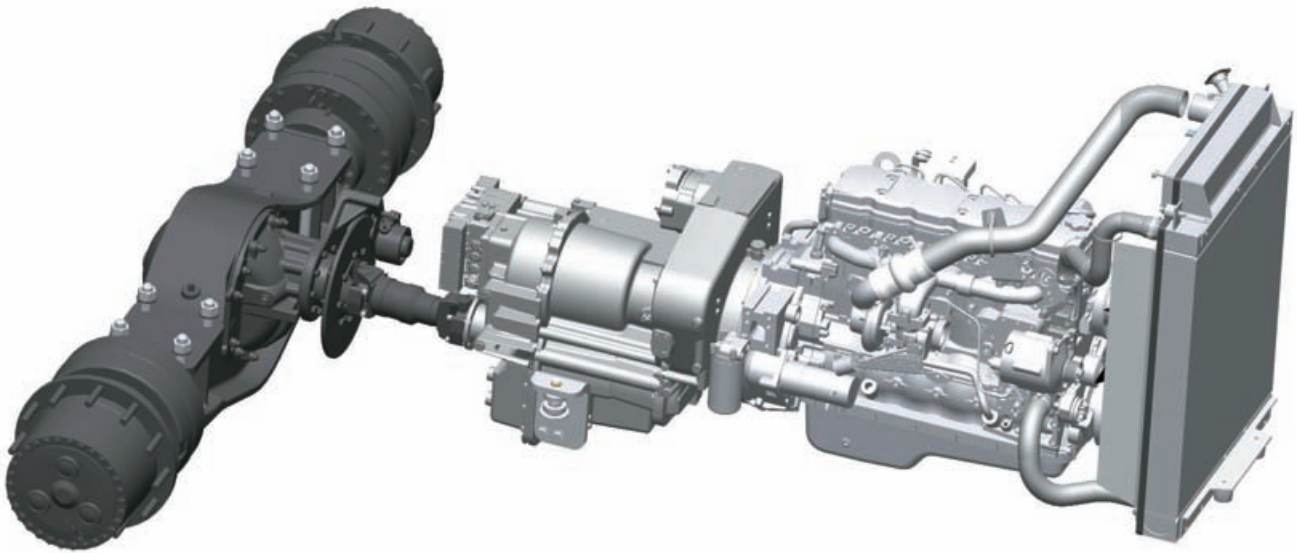
## Strength & Durability

- › The H16.00-18.00XM(S)-12 features an immensely strong frame, with 16 mm thick members and massive front axle supports.
- › The AxleTech PRC1756 planetary drive axle provides stability and durability; whilst the oil-immersed (wet) disc brakes reduce maintenance requirements.
- › The S.O.H. TE13 or TE17-series 3-speed powershift transmissions feature the APC200 Soft-shift automatic gear shifting system, a transmission protection system and a protective forward-reverse shifting lock-out, which engages at above 5 km/h & 1400 rpm.
- › Hyster's 'sandwich' type steer axle, with a single cylinder and non-adjustable tie rods is renowned for its long life and low maintenance requirements.

**The extensive truck cooling system** (engine, transmission, brakes, hydraulic system) makes the truck suitable for normal applications in ambient temperatures of up to 50°C, or up to 45°C for heavy duty operations.

- › A unique 'side-by-side' 3-piece radiator cooler block for engine (water and intercooler) and transmission is efficient and easy to clean. A 'puller' type fan draws in cleaner air from the top of the truck.
- › A triple hydraulic system cooler, for the brakes and the hydraulic system is ideally mounted at the front of the truck.





## Power & Performance

- › Lifting speeds are class-leading. The practical 4-mode average lifting speed is a fantastic 0.36 m/sec.\*

\*Average of four lifting modes:

unladen lift speed = 0.38 m/sec.,  
fully laden lift speed = 0.33 m/sec.,  
unladen lowering speed = 0.39 m/sec.,  
laden lowering speed = 0.34 m/sec.

- › Clean engine power is provided by the 6.7 litre 6-cylinder Cummins QSB industrial diesel, with turbocharger and charge air cooler.
- › The low exhaust emissions conform to the EC Tier 3 emissions standard for NRMM (Non-Road Mobile Machinery).
- › The engine and transmission protection system initially de-rates and finally shuts down the engine if a problem is detected.
- › A two-stage heavy-duty air filter, plus a maintenance-free cyclonic pre-cleaner makes the truck suitable for dusty operating environments.
- › Aluminized steel anti-corrosive exhaust system.
- › Fuel tank - 323 litre capacity.
- › The industrial rating offers extra durability for long periods of peak power operation.

### Power Package for H16.00XM-12 & H16.00XMS-12:

- › Cummins QSB6.7 with max. 145 kW (197 Hp) at 2000 rpm.
- › This engine is combined with the S.O.H. (Spicer Off-Highway) model TE13, 3-speed powershift transmission, fitted with APC200 'Soft-shift' automatic gear shifting, and protective forward / reverse shifting lock-out. Includes a transmission protection system, with initial de-rating and engine stop.

### Power Package for H18.00XM-12 & H18.00XMS-12:

- › Cummins QSB6.7 with max. 172 kW (230 Hp) at 1800 rpm.
- › Combined with the higher performance S.O.H. TE17 transmission. Also features the APC200 'Soft-shift' automatic gear shifting, protective forward-reverse shifting lock-out, and transmission protection system.

### Optional Power Package for H16.00XM-12 & H16.00XMS-12:

- › Power Package 172 kW engine- and TE17 transmission.



## Ergonomic Design

This new H16.00-18.00XM(S)-12 series features the now familiar Hyster 'Vista' cab, which offers the optimum ergonomic operator environment, and focuses on maximising driver comfort and visibility for maximum productivity.

- › Large windows, fitted with tinted safety glass, offer excellent all-round visibility. This is further enhanced in poor weather conditions by a fresh air inlet, sliding windows, an effective heater and defroster and wipers (with intermittent wipe function) and washers on front, top and rear screens.
- › Air-conditioning is integrated into the heating and ventilation system, with manual temperature control.
- › Full-suspension fully adjustable driver's seat with a high backrest, seat belt, "park brake off" warning buzzer, operator presence system, map reading light and extra air circulation fan.

- › Adjustable steering column, power-assisted steering and lever controls, push-button parking brake and conveniently positioned instruments.
- › Responsive, fully hydraulic brakes and automotive type pedal layout further contribute to driver comfort.
- › This comprehensively equipped operator's cab, mounted on isolators, has an insulated twin-layer floor to help achieve low noise levels. The noise level is 74 dB(A) Leq BITA equivalent at driver's ear.
- › The joystick offers intuitive control of mast lift, tilt and sideshift functions: Fork positioners are operated separately by toggle switches.

As an alternative to the joystick, a levers and switches system is offered: Two levers for lift- and tilt, plus switches for carriage functions.



## Outstanding All-round Visibility

- › The state-of-the-art operator compartment is mounted in a **mid-high** forward position for outstanding overall visibility.
- › Operator visibility is also enhanced by the curved front window, the strong yet slim-line cab construction, the 'wave pattern' overhead guard, plus wipers on the front, top and rear screens.
- › Sunshades are fitted on the top and rear windscreens
- › Wide-view rear view mirrors inside the cab.
- › The truck is equipped with a comprehensive set of road- and work lights and an orange flashing beacon. See full details under **Lights**.
- › The mast lift cylinders are rear-mounted (behind the mast channels) for optimum visibility.
- › Rearward visibility is greatly enhanced by the downward sloping design of the new counterweight.





## Other Features

### High Performance Hydraulics

- › Leak-free ORFS (O-ring) type fittings are used throughout the whole truck.
- › Hydraulic tank capacity is 320 litres.
- › Extensive cooling system with a triple cooler, for the brakes and the hydraulic system is ideally mounted at the front of the truck.

### Brakes

- › **Service Brake:** Front, oil-immersed (wet) disc brakes, with large oil cooler and a separate 10 micron brake oil filter. The brake system is fully hydraulic and charged by an accumulator (no air system).
- › **Parking Brake:** Spring actuated and hydraulically released, on the drive-line, automatically applied when pressure falls below 50 bar. The transmission is disengaged when the parking brake is applied.

### Wheels & Tyres

- › Large 12.00 x 24 or 14.00 x 24 size tyres are fitted for improved tyre life and lower running costs.

Bias pneumatic lug tread tyres are standard.

Optionally available are: Radial pneumatic lug tread tyres or Pneumatic Shaped Solid tyres.

Note: A hydraulic accumulator in the lift system, which acts to cushion the load, is available as an option.





### Electrical System

- › 24 V system, 70 A alternator, Battery 94 Ah (20 hr.). Battery master switch.
- › CANbus connection in the cab, for engine, transmission, and instruments cluster.

### Lights

- › A complete light kit is fitted, comprising of: 2 front work lights mounted on the mast, 2 front drive lights on the front fenders, 2 rear work/drive lights on the cab, 2 combination tail- & stop- & rear driving lights on the rear fenders, 4 direction indicators with warning switch. Orange flashing beacon, on the cab roof.

### Instruments & Displays

- › **Warning Lights:** Engine oil pressure, transmission oil pressure, transmission oil temperature, battery discharge indicator, low brake oil pressure, parking brake on.
- › **Gauges:** Engine coolant temperature, fuel, transmission oil pressure, transmission oil temperature, voltmeter, engine oil pressure.
- › **Other Indicators:** Hour meter, low brake pressure buzzer, combination key-type ignition/starter switch with starter lock out, reverse warning alarm.



## Ease of Servicing

- › The hydraulic oil tank features a gauge for oil level as well as magnetic drain plugs.
- › The cab tilts to the right-hand side and is electrically powered. A back-up hand lever pump is also provided.
- › In combination with the gas-spring assisted 'gull-wing' type engine hoods and the rear opening hood, this provides truly excellent access for more extensive maintenance work.

## Standard Equipment

- › Available with 3.75 m wheelbase, or with 'S' (short) 3.50 m wheelbase.
- › Air-conditioning, full-suspension seat, seat belt, reading light, extra air circulation fan.
- › Powerful industrial diesel engine, with turbo and charge air cooler, conforms to stringent EC Tier 3 emissions regulation.
- › Two-stage heavy-duty engine air filter, plus a maintenance-free cyclonic pre-cleaner, suitable for dusty operating environments.
- › Ample cooling system capacity, suitable for tropical conditions.
- › Aluminized steel anti-corrosive exhaust system.
- › Autoshift transmission, with APC200 soft-shift system. The transmission also has a protective lock-out function on forward-reverse shifting.
- › Engine and transmission protection, with initial power reduction and final shut-down.
- › Oil-immersed (wet) disc brakes.
- › Complete light kit and flashing beacon.
- › Sideways tilting cab, with convenient push-button operation, for excellent service access.





## Optional Equipment

- › Application-specific masts, carriages and forks or coil ram.
- › Radial pneumatic tyres or solid (pneumatic shaped) tyres.
- › Spare wheel, with bias diagonal or radial tyre.
- › Lifting eyes (two on the mast, two on the rear counterweight)

### Alternative Light Kits:

- › **Light Kit No. 1**, instead of standard light kit no. 3. Consists of:
  - 2 front work lights on the mast,
  - 2 rear work/drive lights on the cab,
  - 2 combination tail- & stop- & rear driving lights, on rear fenders.
- › **Light Kit No. 2**, instead of standard light kit no. 3. Recommended for use with a (carriage-mounted) EC spreader, or when handling wide loads. Consists of:
  - 4 front work lights (to 20' and 40' position) on the cab,
  - 2 rear work/drive lights on the cab,
  - 2 combination tail- & stop- & rear driving lights, on rear fenders,
  - 2 drive lights on the front fenders,
  - 4 direction indicators with hazard switch.
- › Extra power package for H16.00XM(S)-12 models: 172 kW / 230 Hp engine and TE-17 transmission, instead of standard 145 kW / 195 Hp engine and TE-13 transmission.

- › Coil ram pole: 1 800 to 2 400 mm long, coil ram pole with 298 mm diameter. Max. ram pole capacity 19300 kg @ 1200 mm l.c.
- › Extra rear view mirrors on the front fenders.
- › Open Operator Module, instead of fully equipped cab.
- › Mudflaps on the rear and front wheels.
- › Wheel nut protection rings, on the steer wheel hubs.
- › Special colour(s) RAL paint.
- › Hydraulic accumulator in the hoist system, recommended for uneven ground conditions.

### In-Cab / Operator Convenience Items:

- › Without air-conditioning (at deduct price), but including top- and rear sun screens.
- › Choice of hand controls: joystick or levers and switches.
- › Air suspended seat, instead of mechanically suspended seat.
- › Trainer seat (small extra seat cushion).
- › Support stand with mounting plate, to fit computer terminal or communications equipment.
- › Converter: 24 Volt DC to 12 Volt DC.



## Strong Partners, Tough Trucks, for Demanding Operations, Everywhere.

Hyster supplies a complete range of warehouse equipment, IC and electric counterbalanced trucks, container handlers and reach stackers.

Hyster is committed to being much more than a lift truck supplier. Our aim is to offer a complete partnership capable of responding to the full spectrum of materials handling issues:

Whether you need professional consultancy on your fleet management, fully qualified service support, or reliable parts supply, you can depend on Hyster.

Our network of highly trained dealers provides expert, responsive local support. They can offer cost-effective finance packages and introduce effectively managed maintenance programmes to ensure that you get the best possible value. Our business is dealing with your materials handling needs so you can focus on the success of your business today and in the future.



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